

FIG. 1

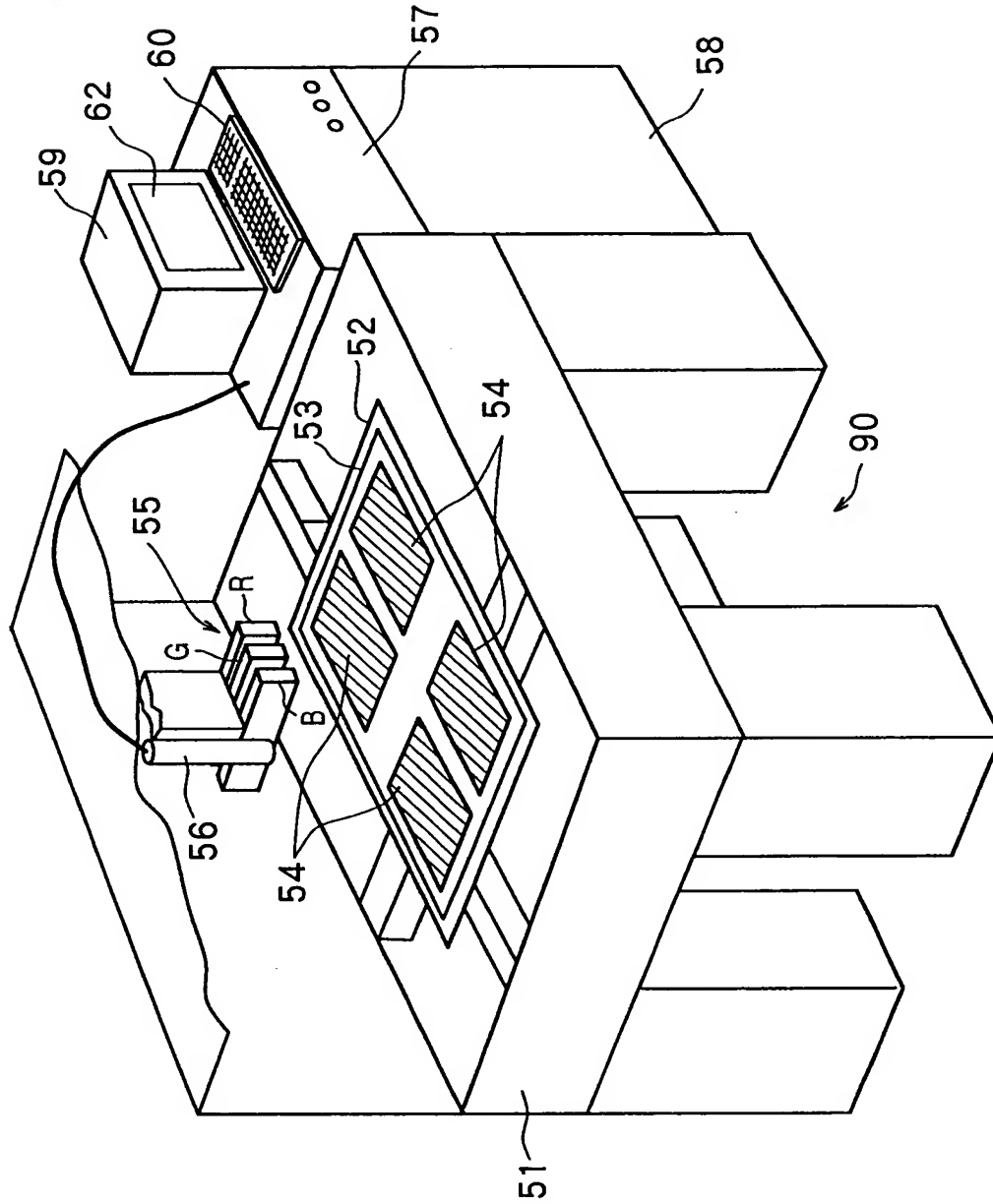


FIG. 2

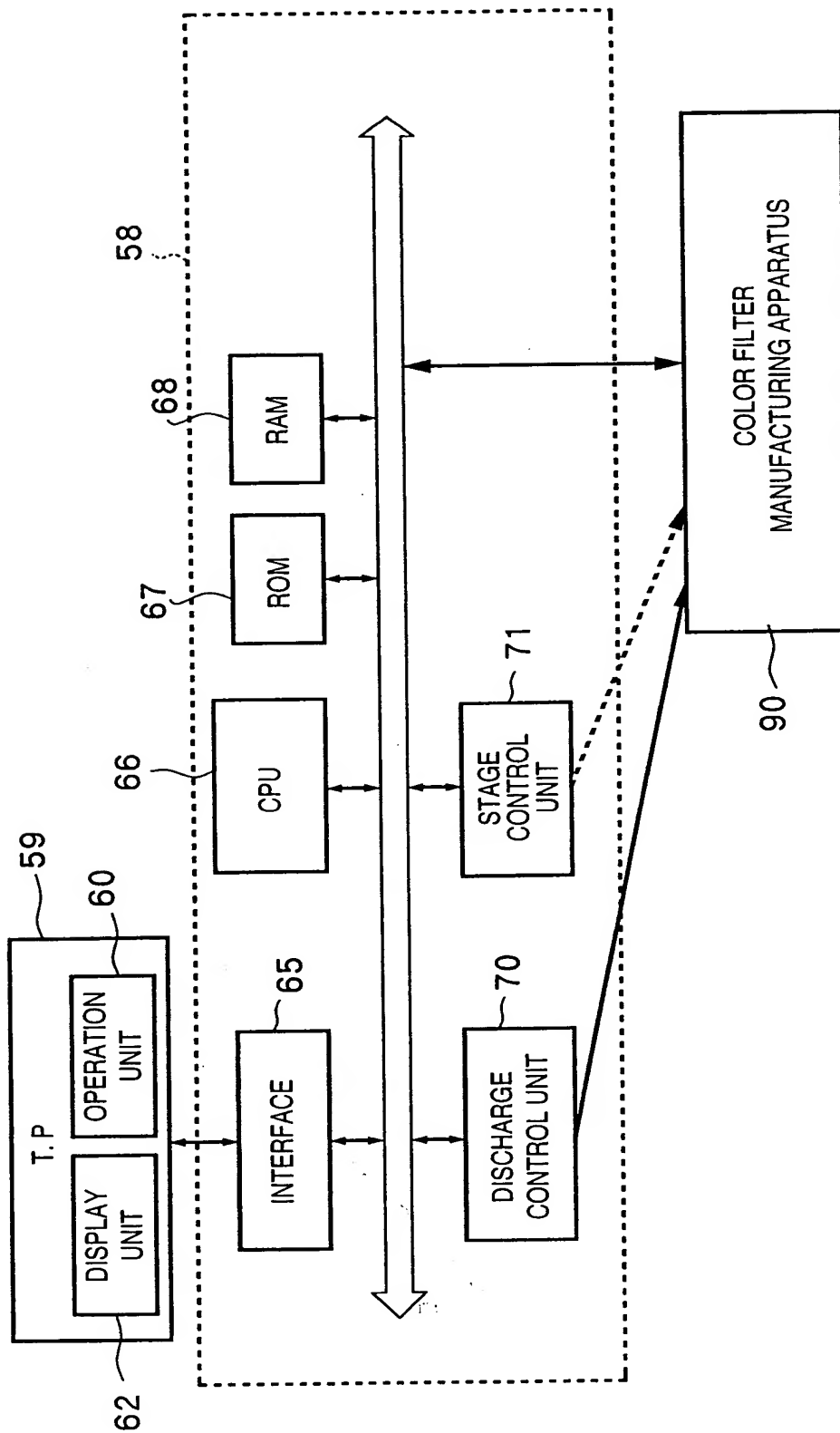


FIG. 3

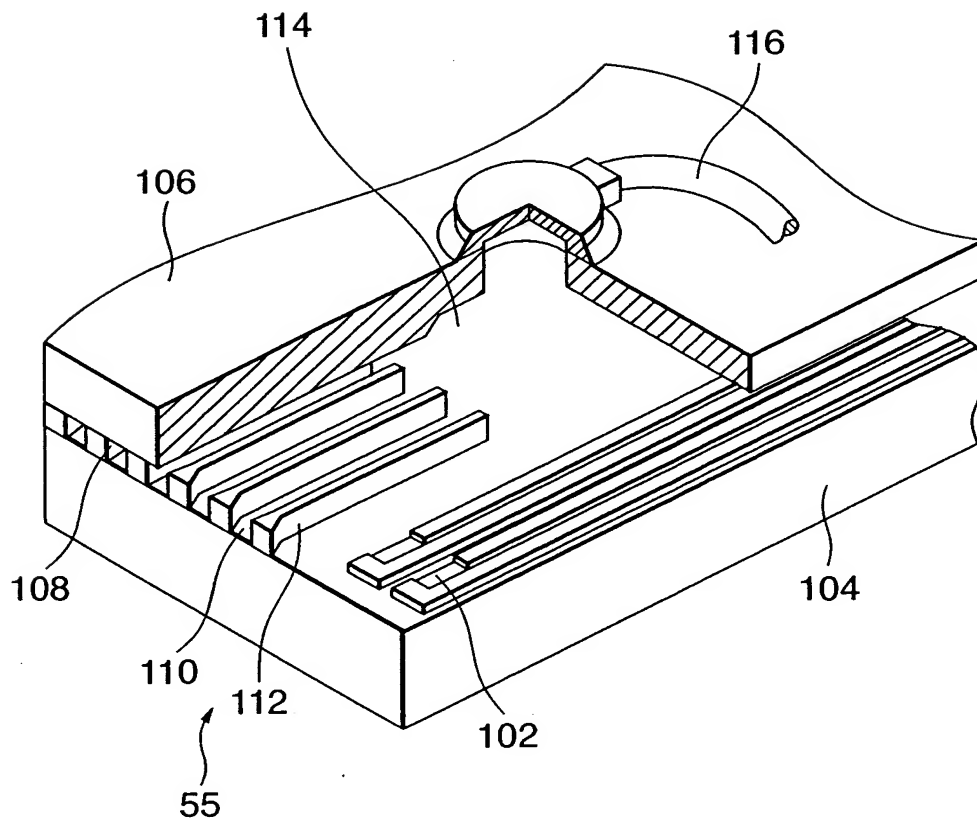
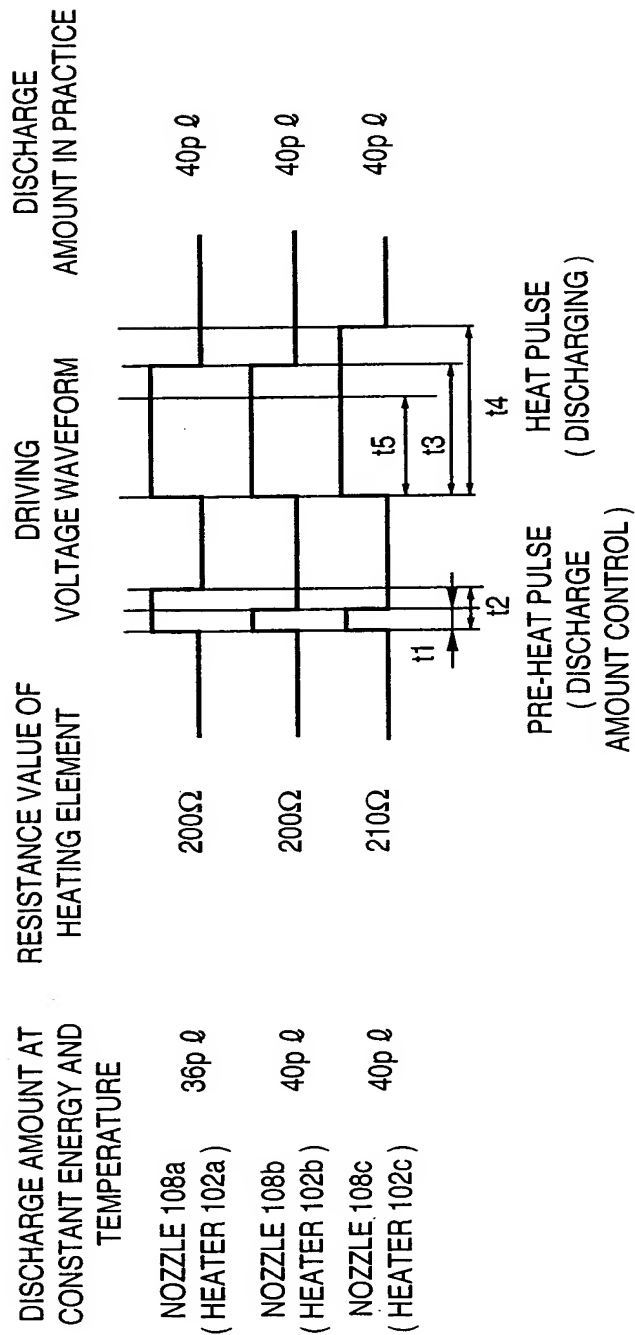


FIG. 4





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FIG. 5A

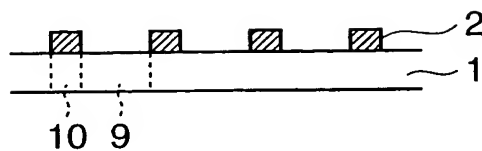


FIG. 5B

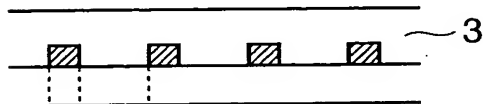


FIG. 5C

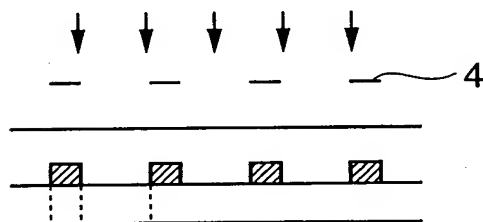


FIG. 5D

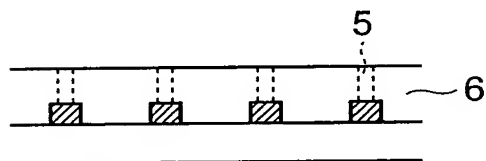


FIG. 5E

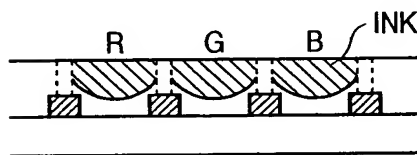


FIG. 5F

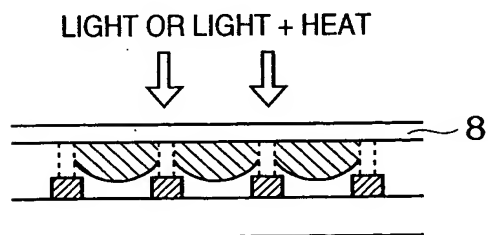


FIG. 6

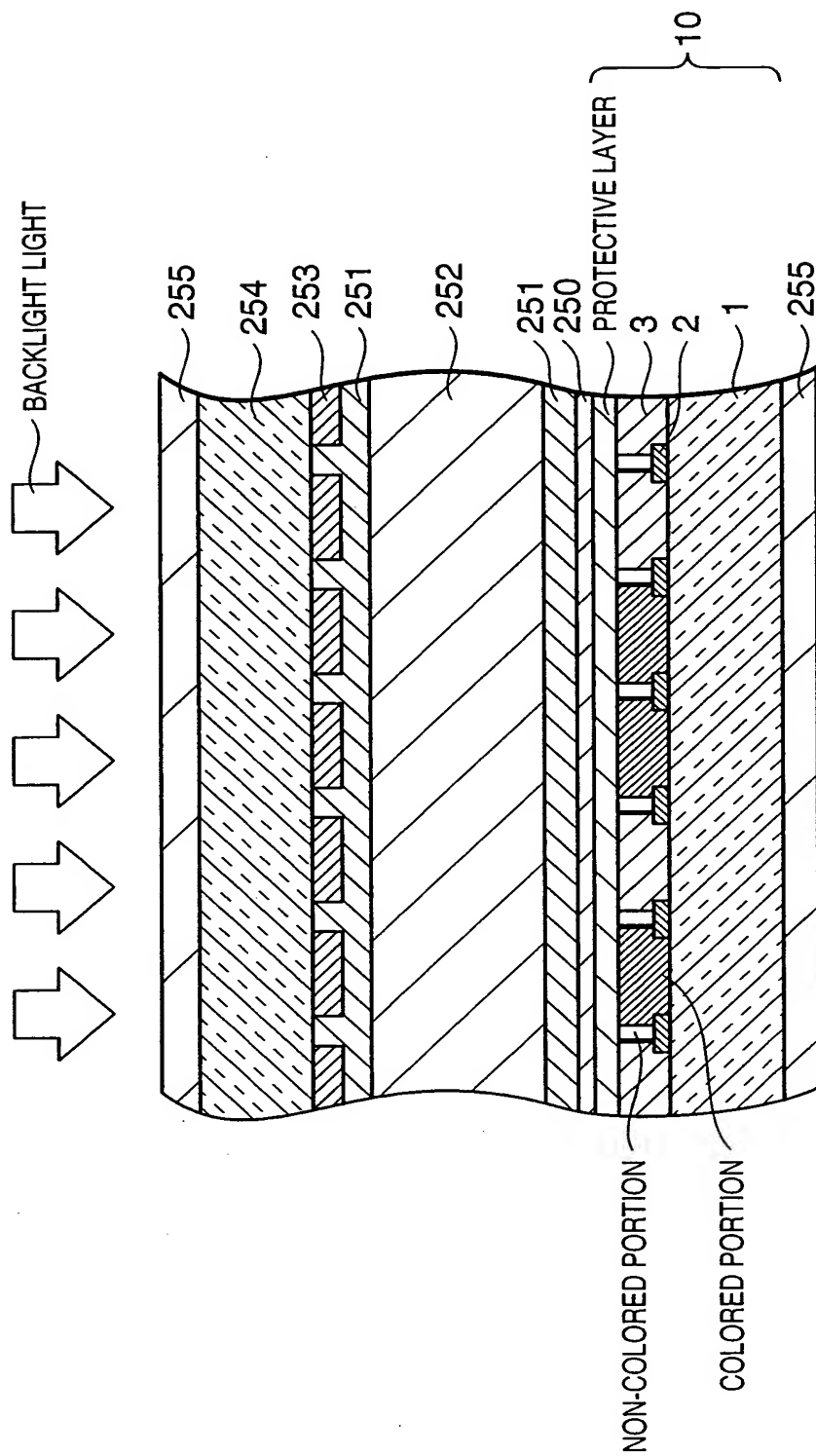




FIG. 8

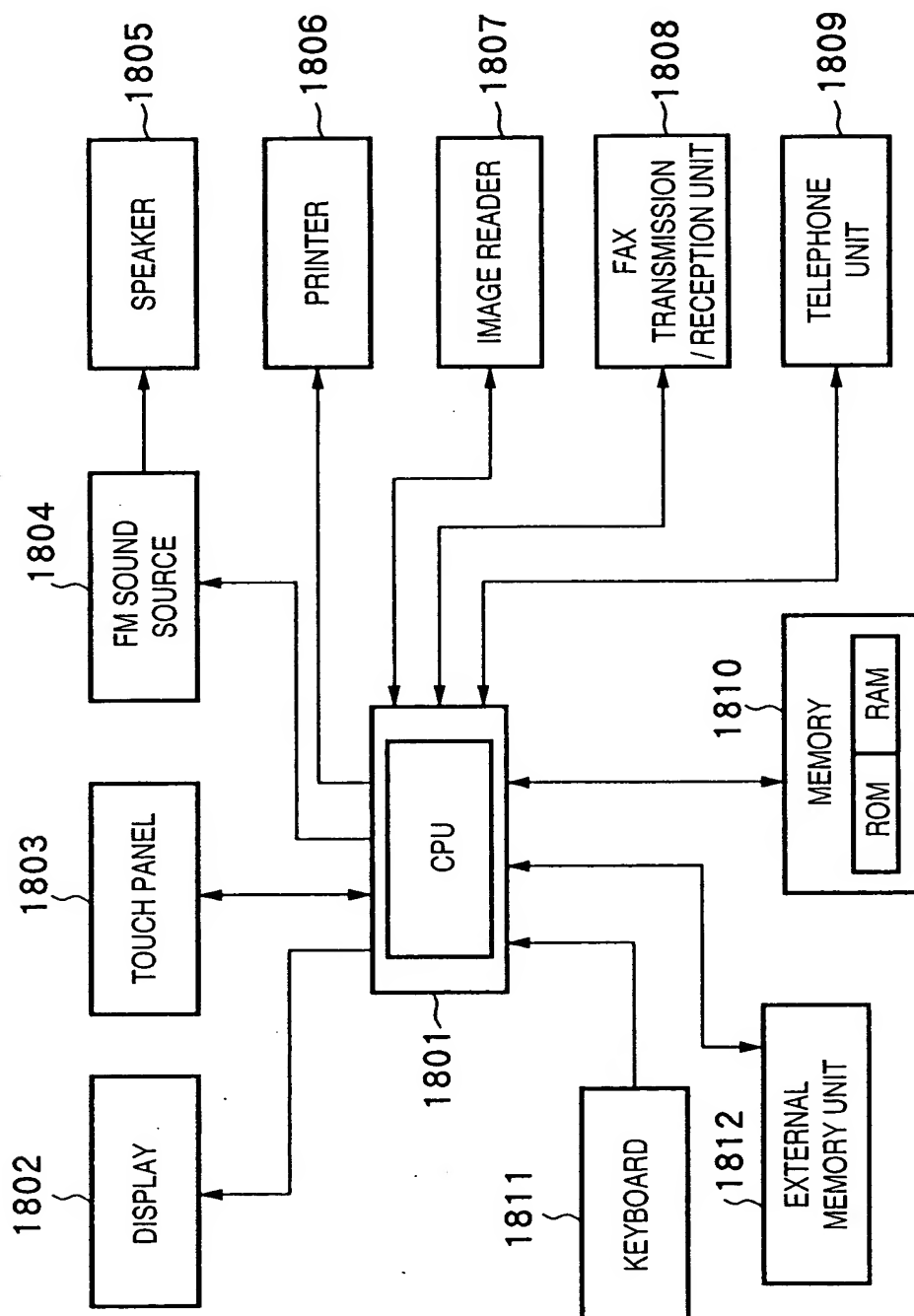




FIG. 9

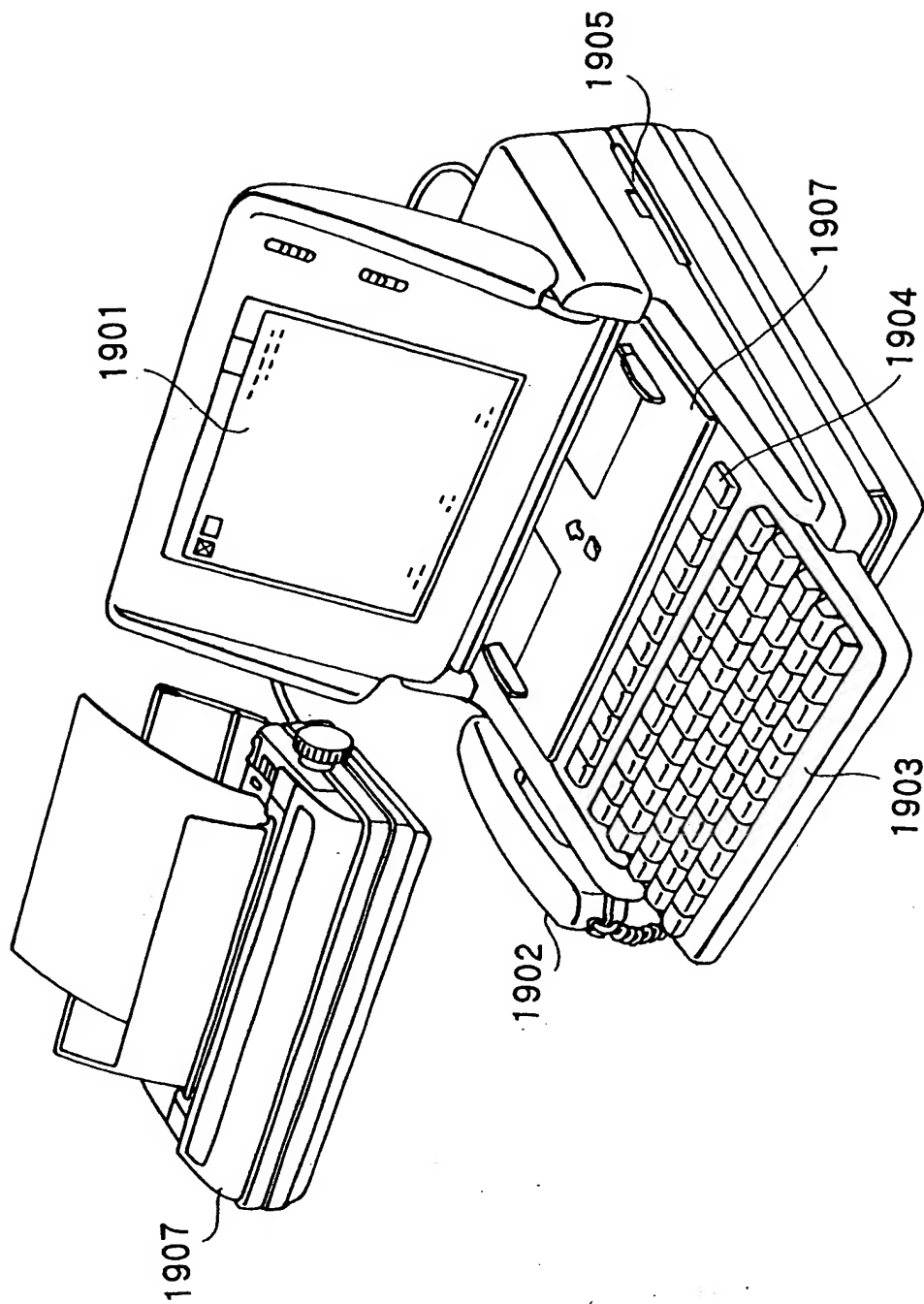


FIG. 10

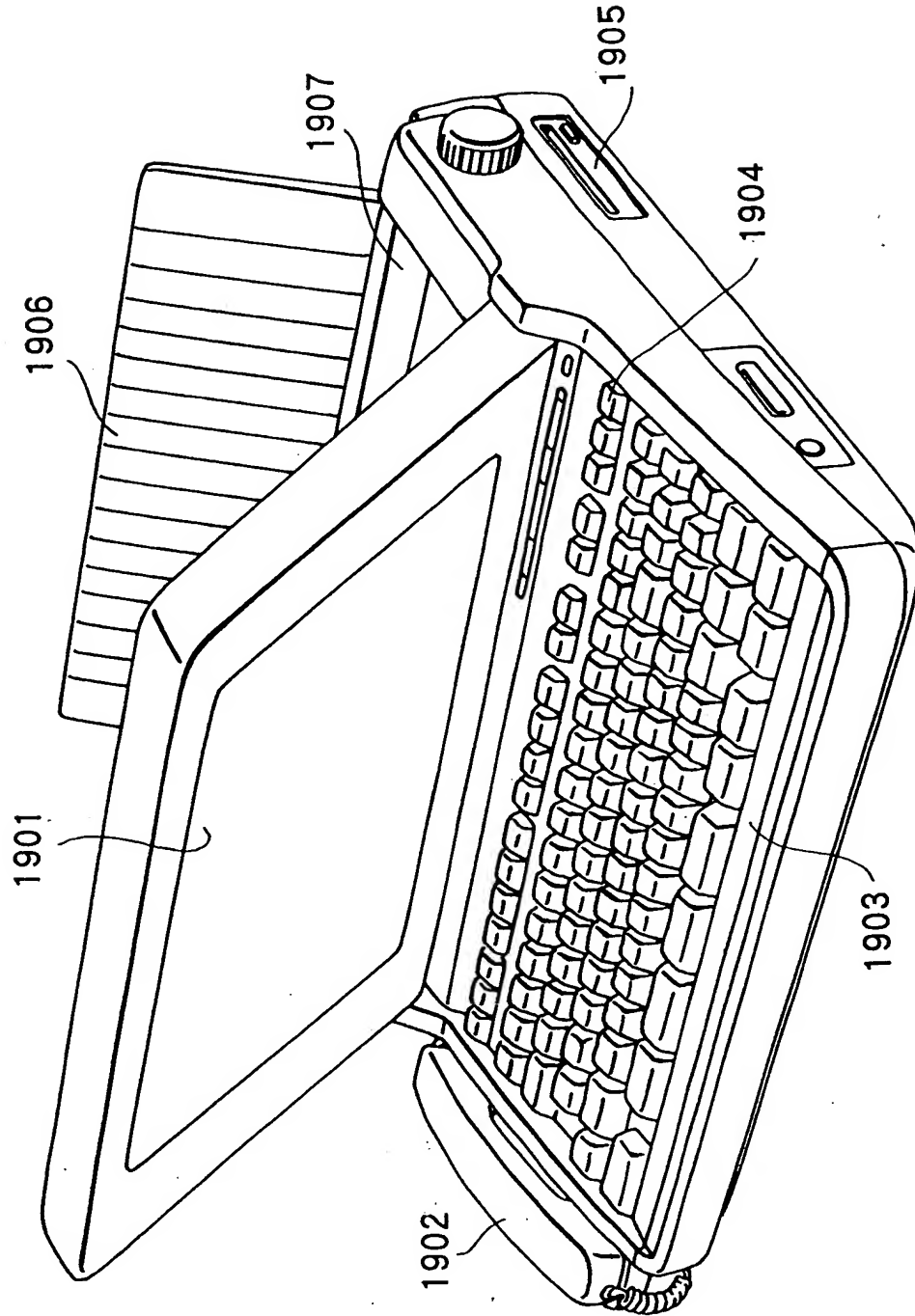


FIG. 11

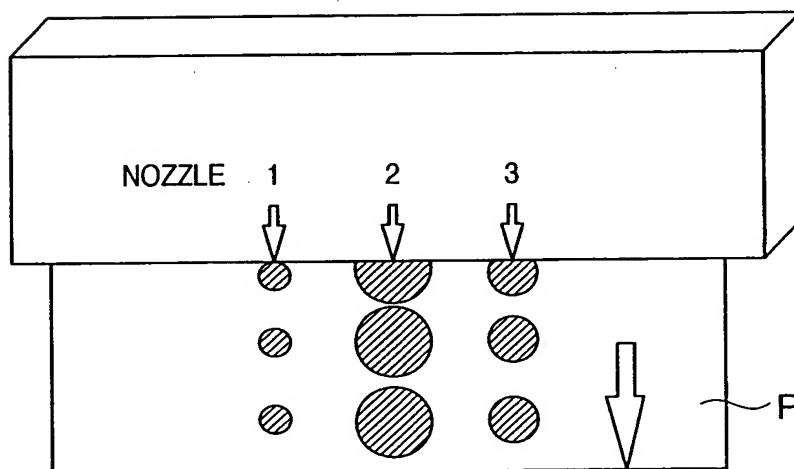
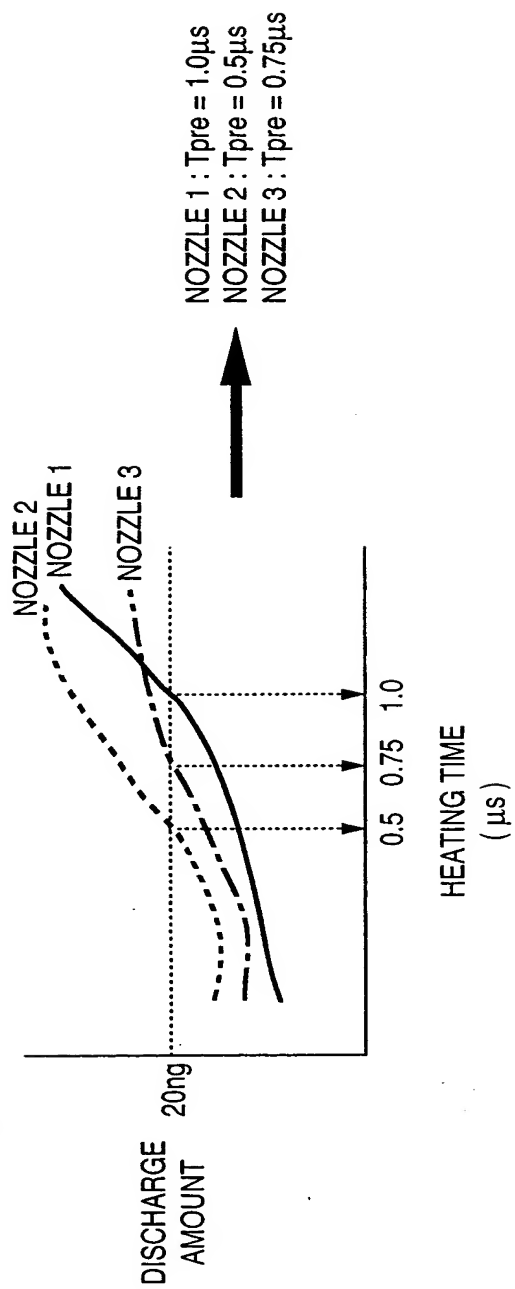


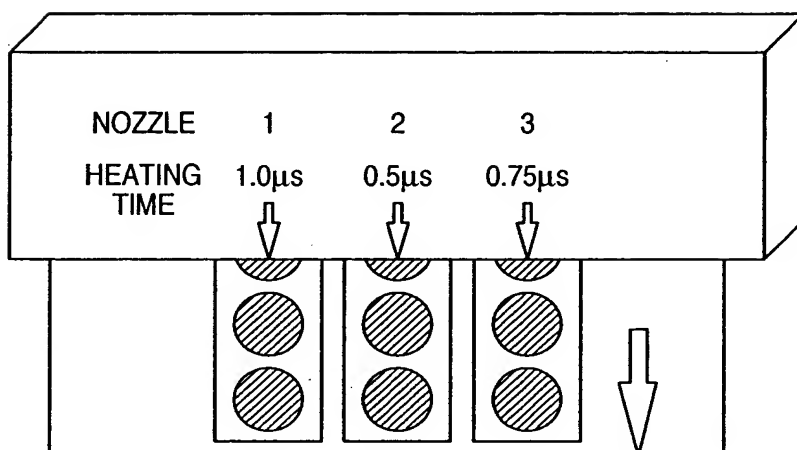
FIG. 12

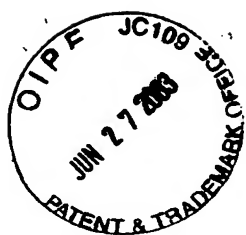




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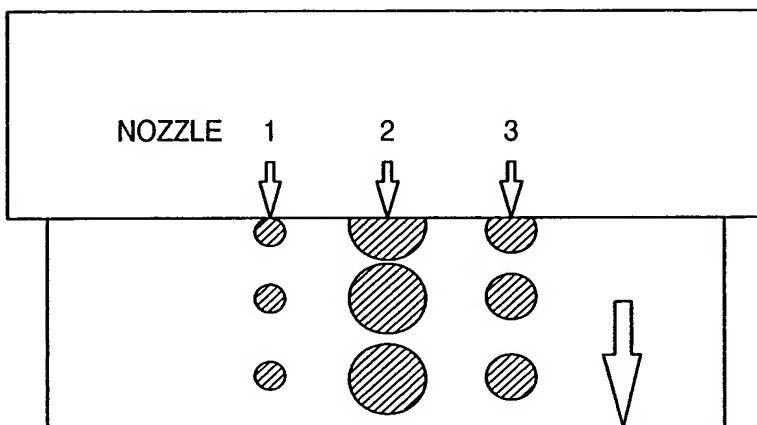
**FIG. 13**





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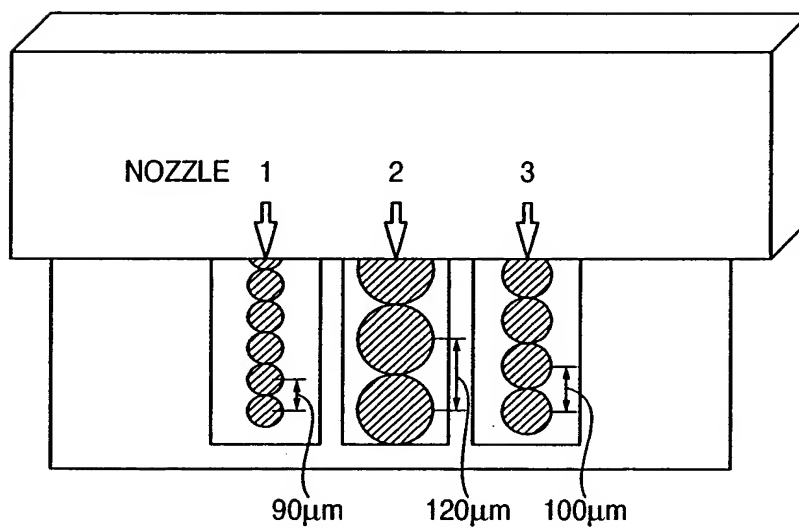
**FIG. 14**





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**FIG. 15**



**FIG. 16**

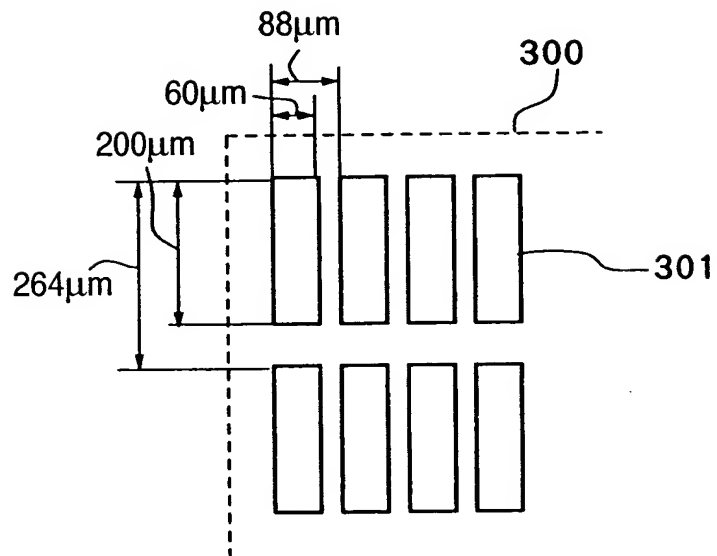
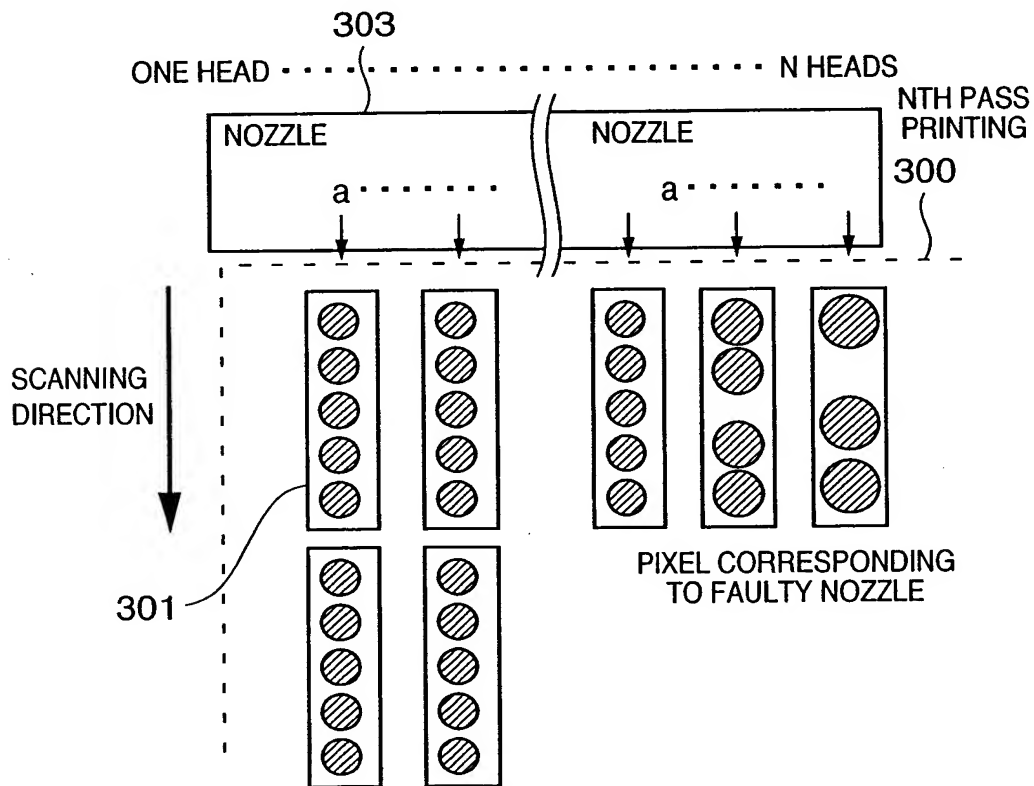




FIG. 17



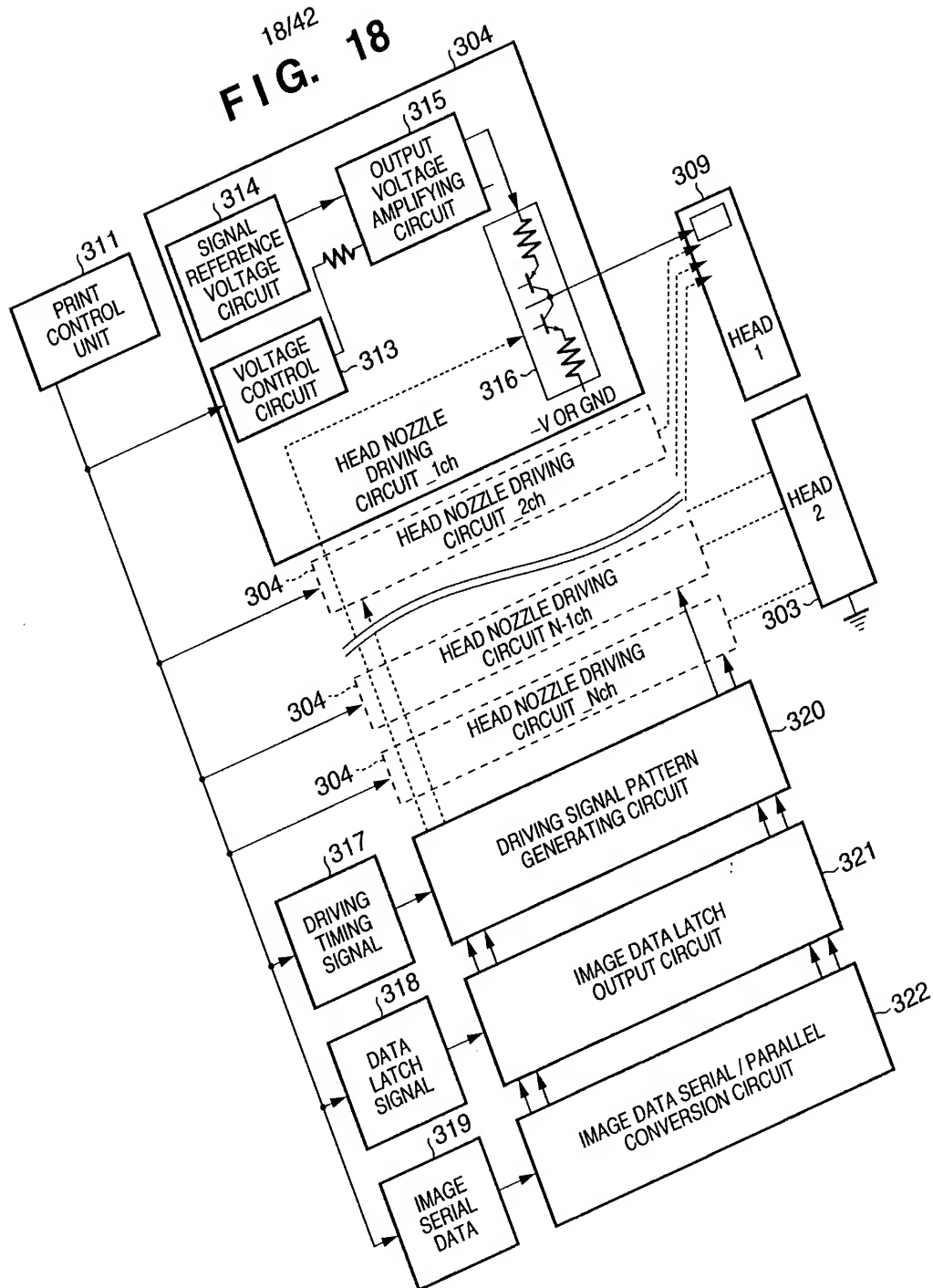
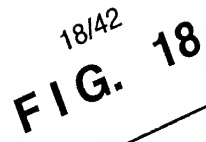
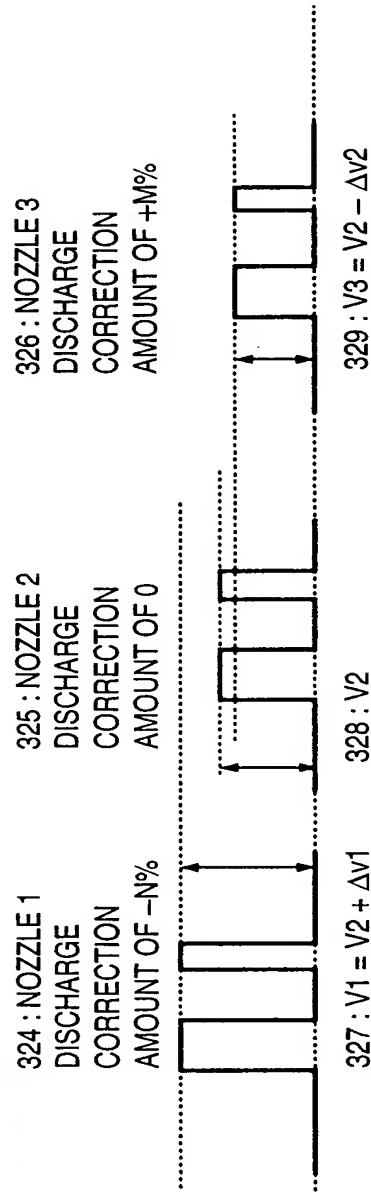
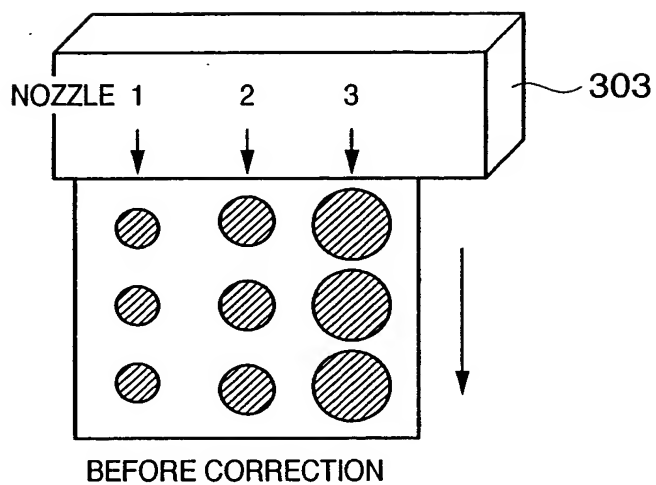


FIG. 19

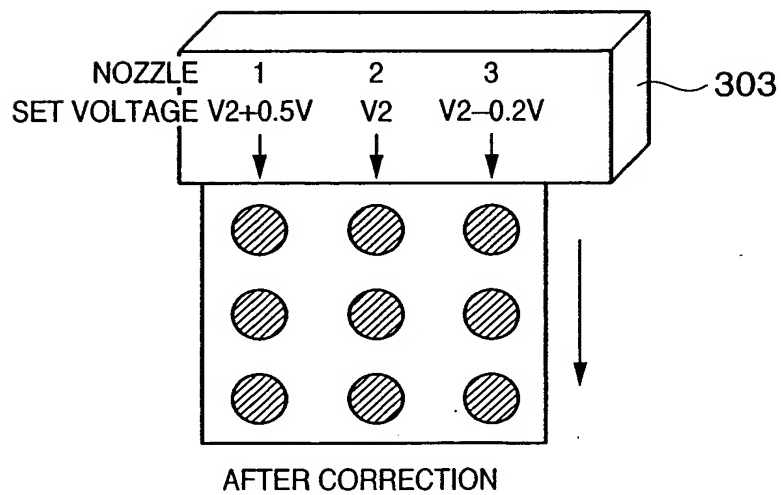


NOTE THAT FOREGOING CHART REPRESENTS REFERENCE EXAMPLE OF 2-PLS DRIVING  
 $V1, V2, V3$ : SET DRIVING SIGNAL VOLTAGE,  $\Delta v1, \Delta v2$ : CORRECTION VOLTAGE

**FIG. 20A**



**FIG. 20B**





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## FIG. 21

### 1. DATA MEASUREMENT WITHOUT CORRECTION OF DISCHARGE AMOUNT OF HEAD

#### 1-1 MEASUREMENT OF DISCHARGE AMOUNT OF HEAD AND DRIVING CONDITION CHARACTERISTICS

(1) CHANGE DRIVING CONDITIONS AT ARBITRARY TWO POINTS OR MORE AND PERFORM PRINTING UPON SETTING OF RESPECTIVE CONDITIONS

(2) MEASURE DISCHARGE AMOUNT OF EACH NOZZLE FROM PRINTING RESULT IN (1)

(3) CALCULATE CORRECTION SENSITIVITY CORRESPONDING TO DRIVING CONDITION FOR EACH NOZZLE FROM CHANGE IN DISCHARGE AMOUNT WITH RESPECT TO DRIVING CONDITION FOR EACH NOZZLE ON THE BASIS OF RESULT IN (2) :

$$K = (Vd2 - Vd1) / (V2 - V1)$$

WHERE K : CORRECTION SENSITIVITY, AND Vd1 AND Vd2 : DISCHARGE AMOUNTS AT ARBITRARY POINTS

#### 1-2 CALCULATION OF CORRECTION VALUE

(4) CALCULATE AVERAGE VALUE OF ALL NOZZLES FROM CORRECTION SENSITIVITY IN (3) AND DISCHARGE AMOUNT OF EACH NOZZLE UNDER DRIVING CONDITION IN PRINTING OPERATION, CALCULATE DIFFERENCE BETWEEN AVERAGE VALUE AND DISCHARGE AMOUNT OF EACH NOZZLE AND CORRECTION VALUE, AND SET CORRECTION VALUE CALCULATED FROM RESULTANT CORRECTION AMOUNT AND CORRECTION SENSITIVITY IN (3):

$$VdX = \Sigma (Vdn1, \dots, VdnN) / N$$

WHERE VdX : AVERAGE DISCHARGE AMOUNT AND Vdn1 AND VdnN : DISCHARGE AMOUNT OF EACH NOZZLE AT ARBITRARY DRIVING VOLTAGES

$$Vdn1Y = K * (Vdn1 - VdX)$$

$$Vdn2Y = K * (Vdn2 - VdX)$$

$$VdnNY = K * (VdnN - VdX)$$

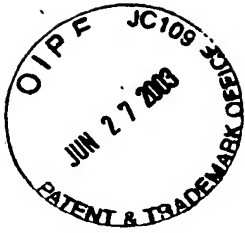
WHERE Vd1Y, ..., VdnY: CORRECTION VALUE FOR EACH NOZZLE

(5) SET CORRECTION VALUE IN (4) TO DRIVING CONDITION AND PERFORM PRINTING OPERATION

#### 2. DISCHARGE AMOUNT CORRECTION FOR EACH NOZZLE OF HEAD

(6) REPEAT (4) AND (5) IF IT IS DETERMINED FROM PRINTING RESULT THAT DISCHARGE AMOUNT IS NOT TARGET DISCHARGE AMOUNT

TERMINATE DISCHARGE AMOUNT CONTROL PROCESSING



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FIG. 22

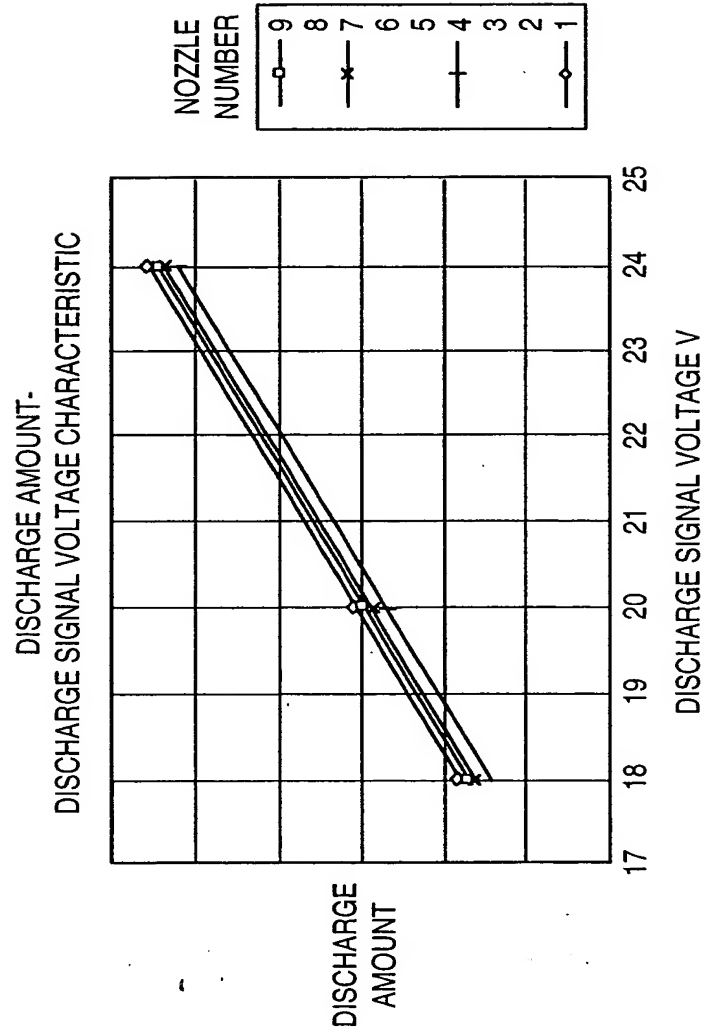
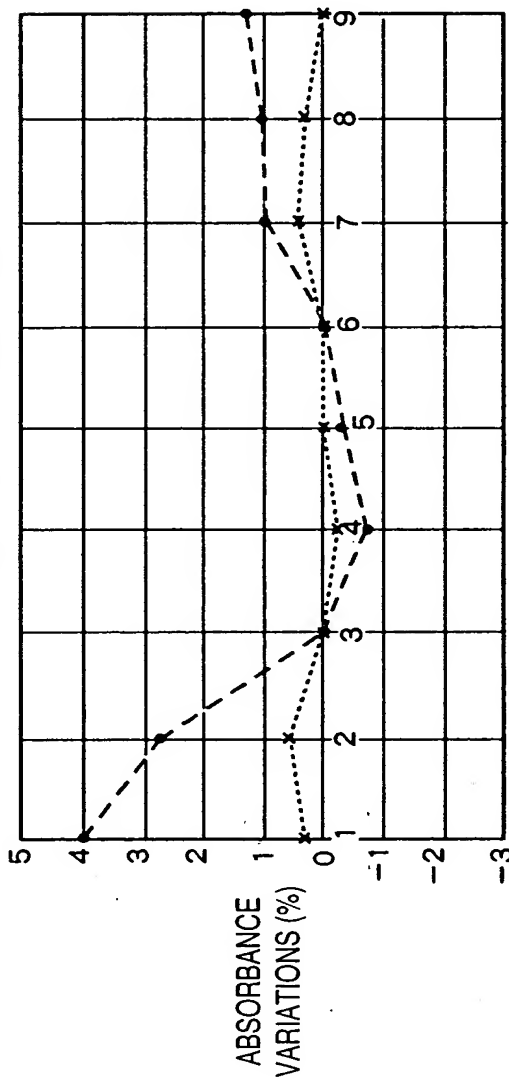


FIG. 23

DISCHARGE AMOUNT VARIATION CHARACTERISTIC  
( BEFORE/AFTER CORRECTION )



NOZZLE No

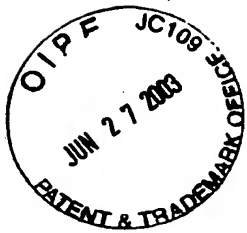
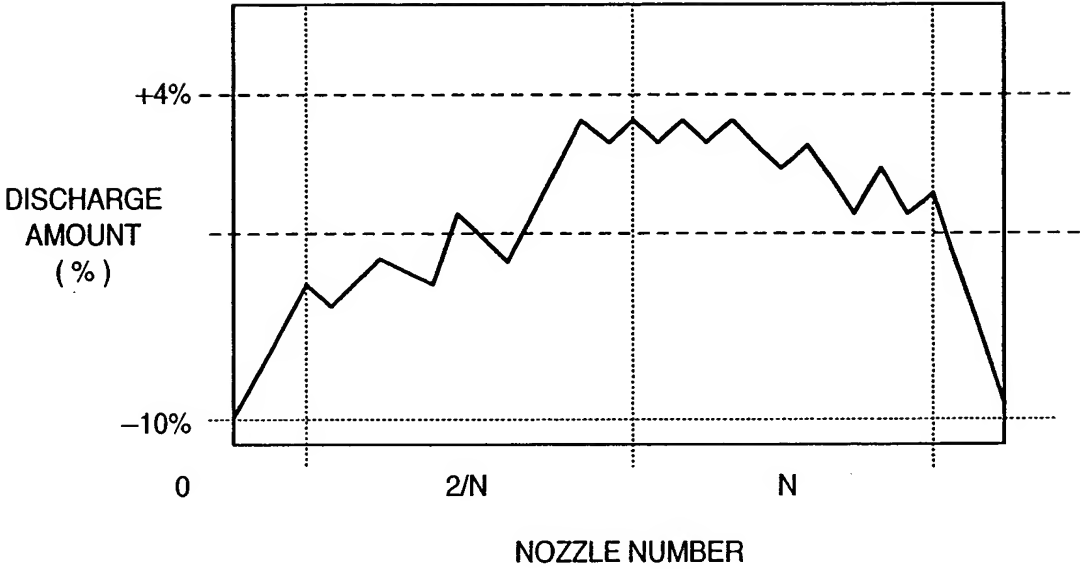
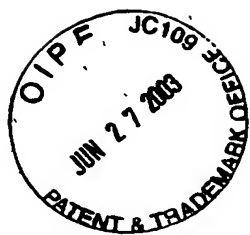


FIG. 24







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**FIG. 25**

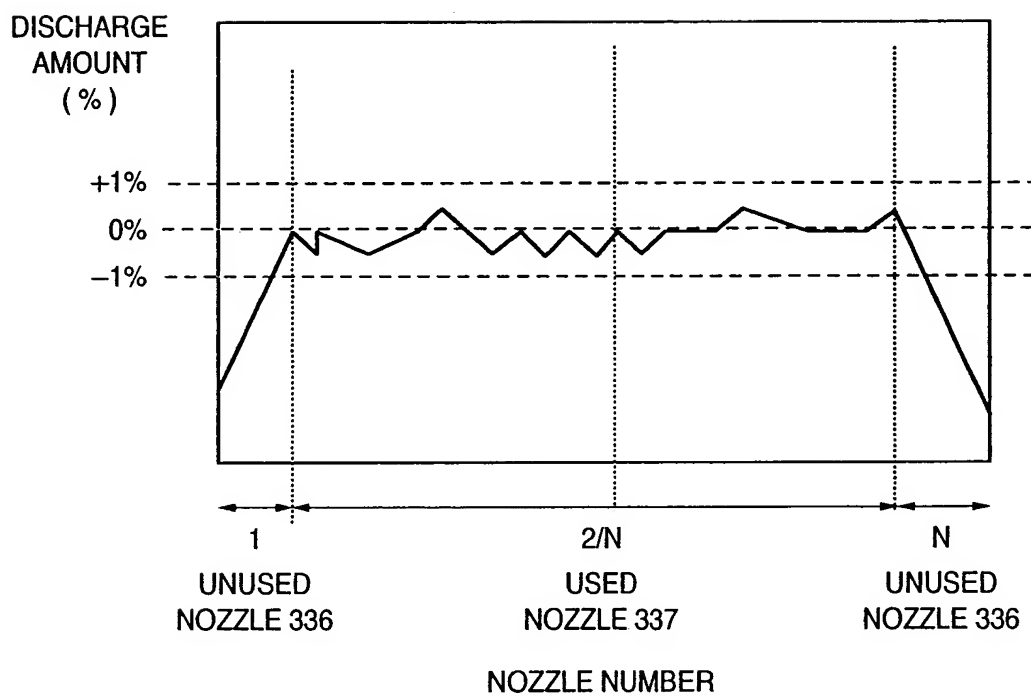


FIG. 26

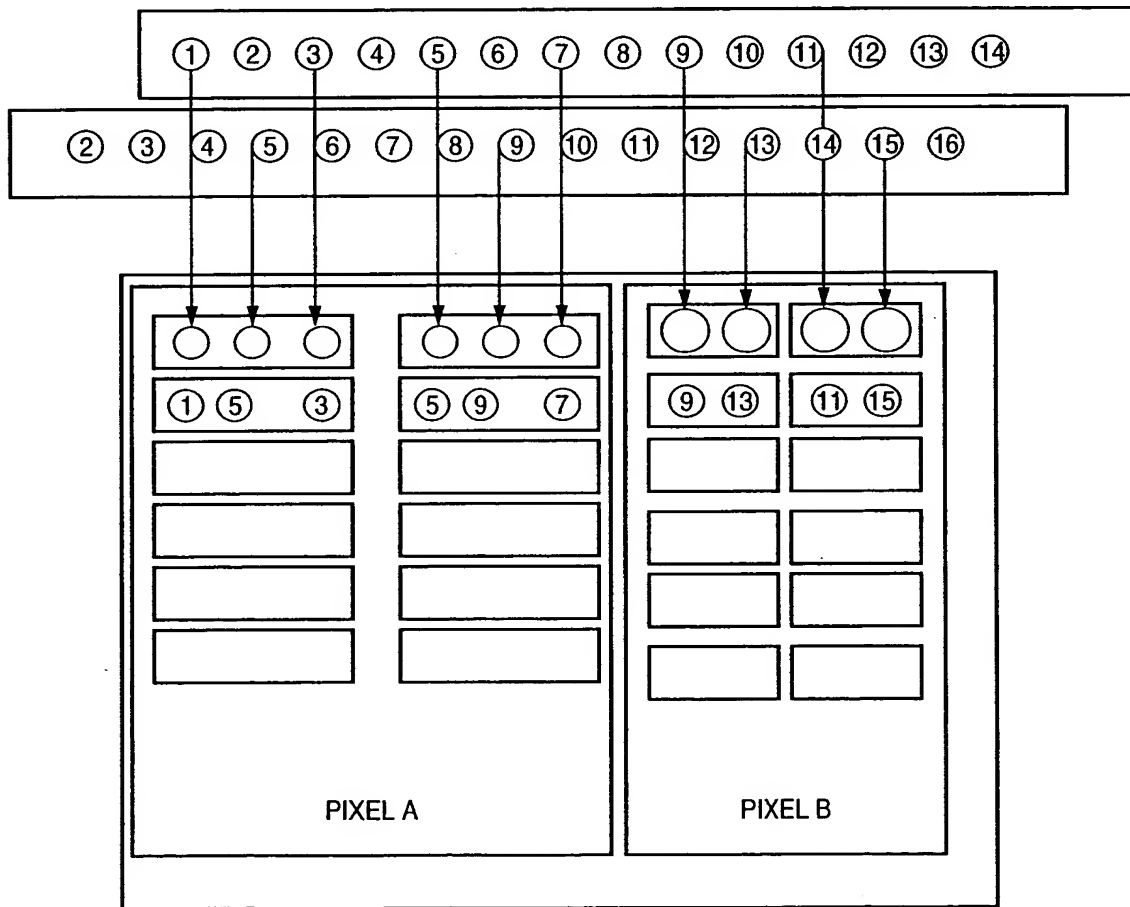
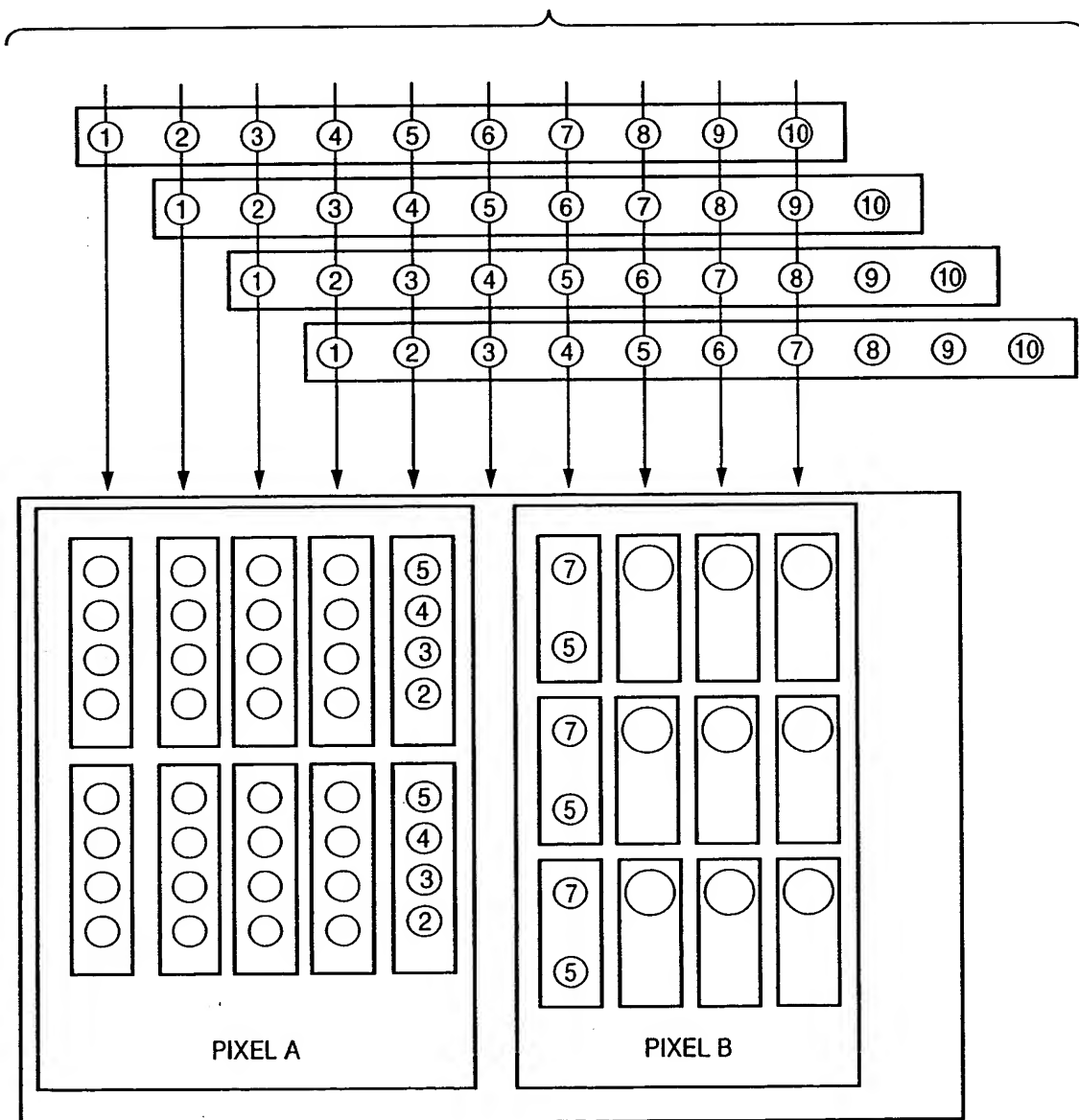
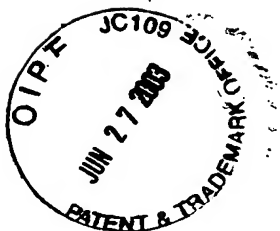


FIG. 27





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**FIG. 28**

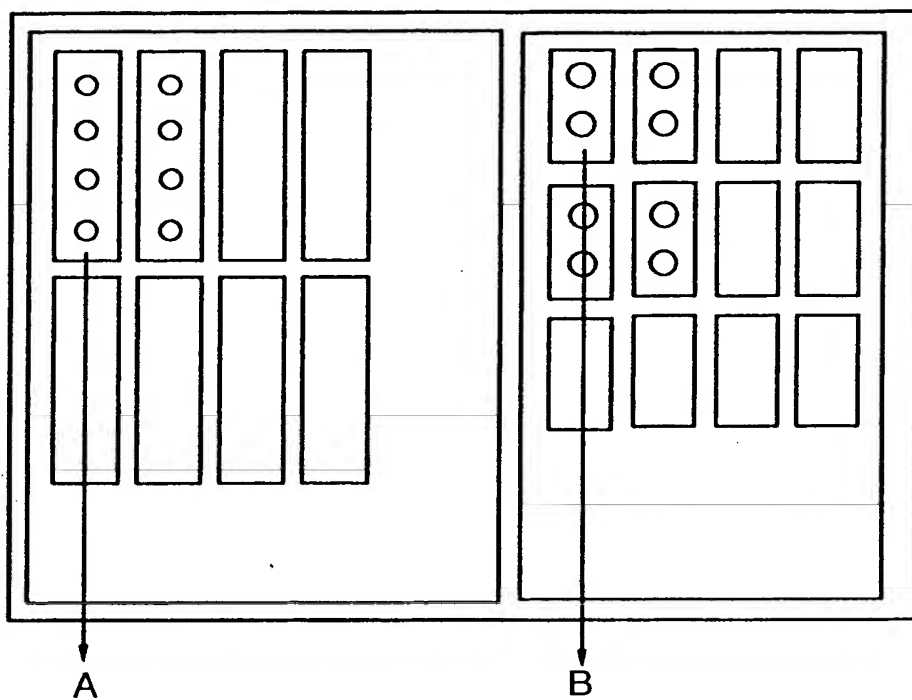


FIG. 29

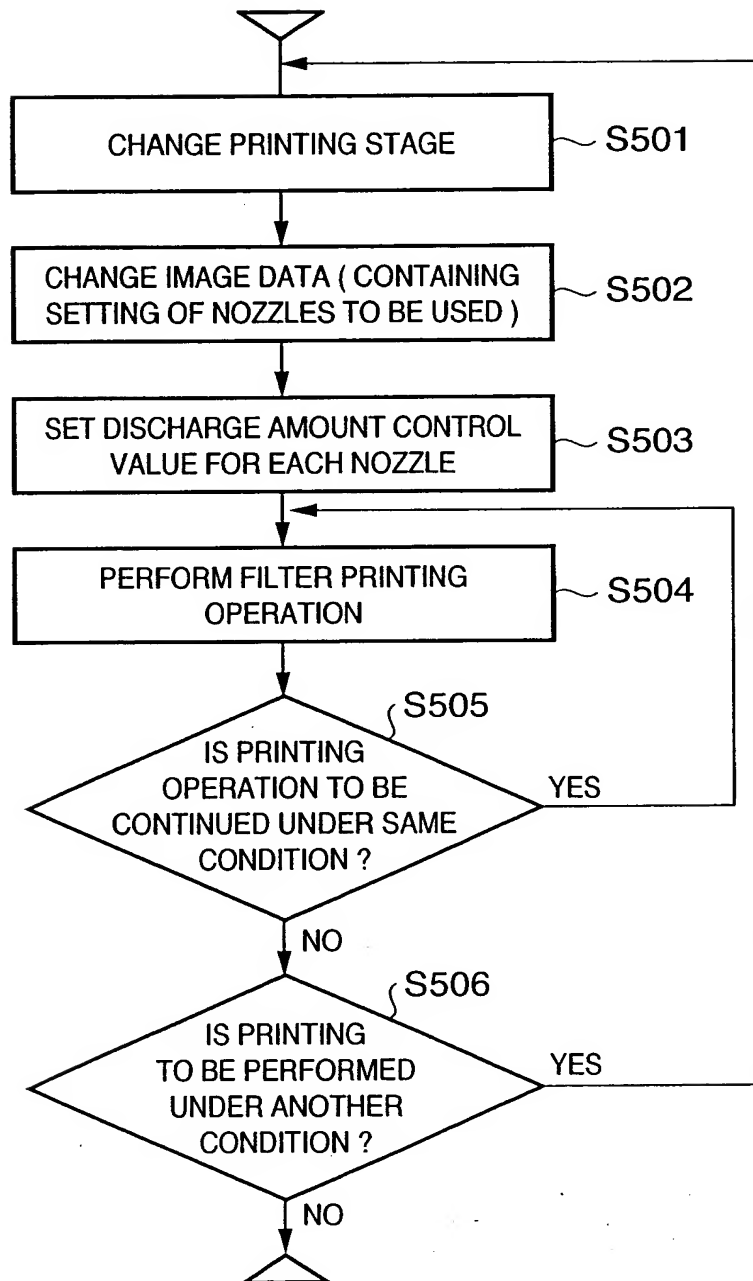


FIG. 30

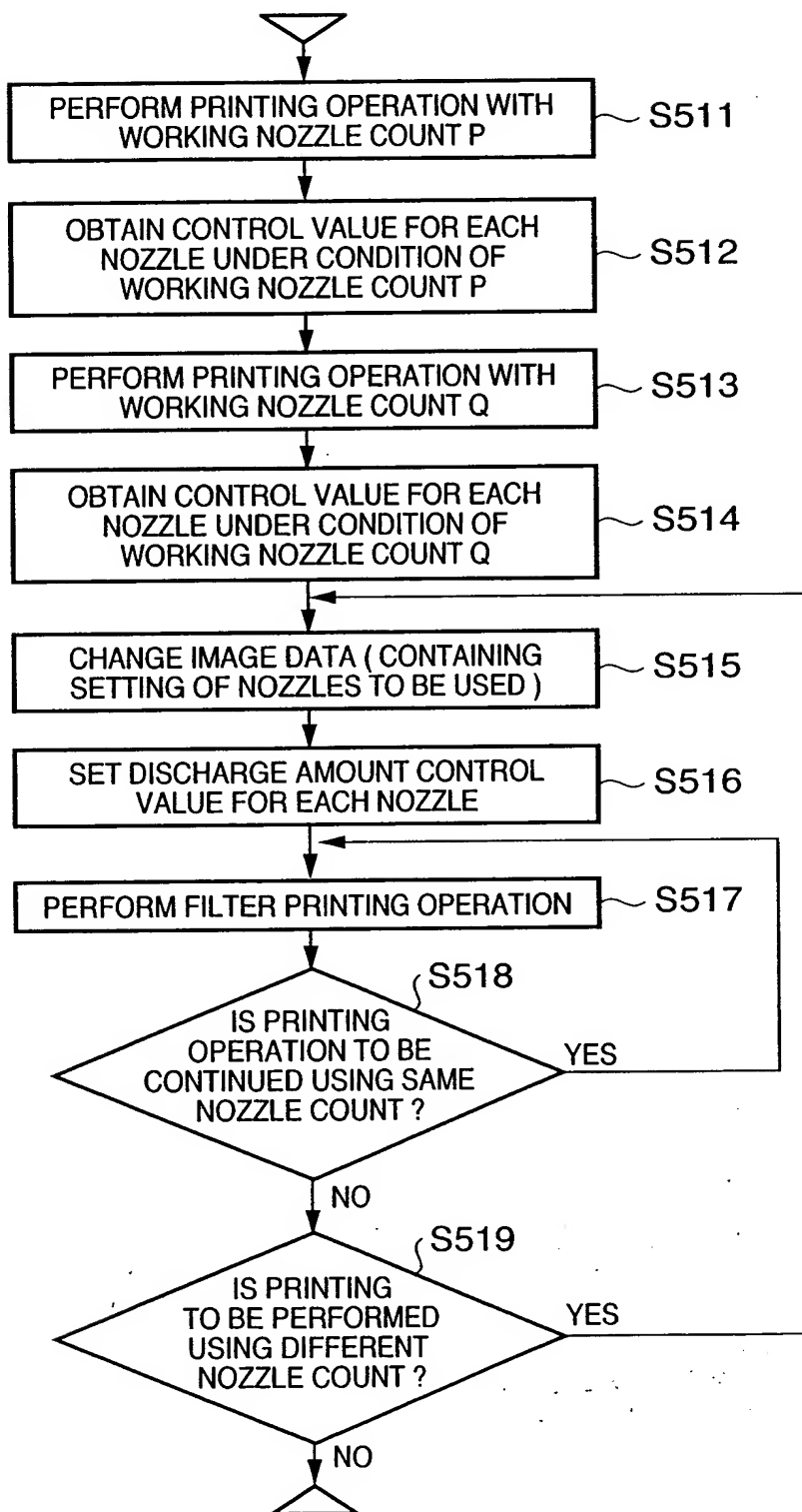


FIG. 31

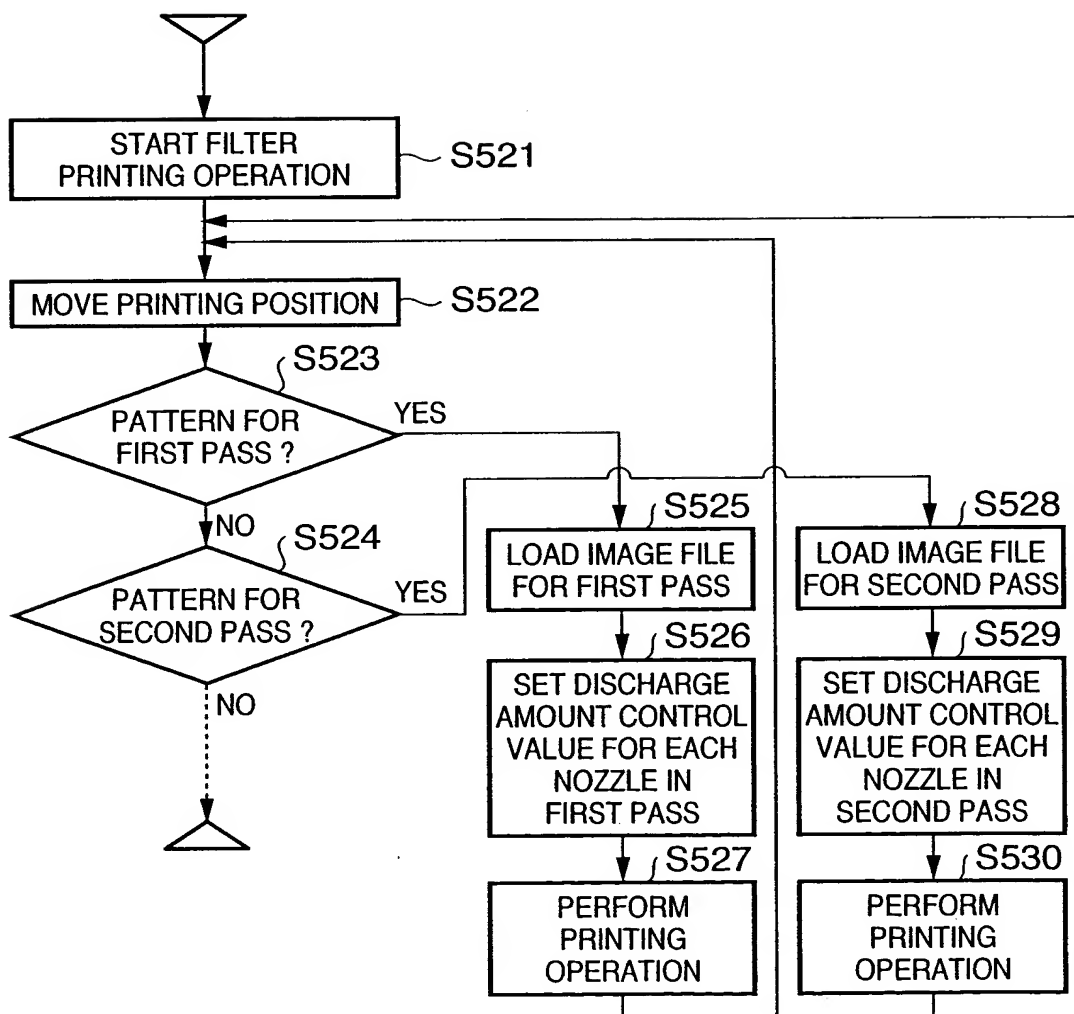


FIG. 32

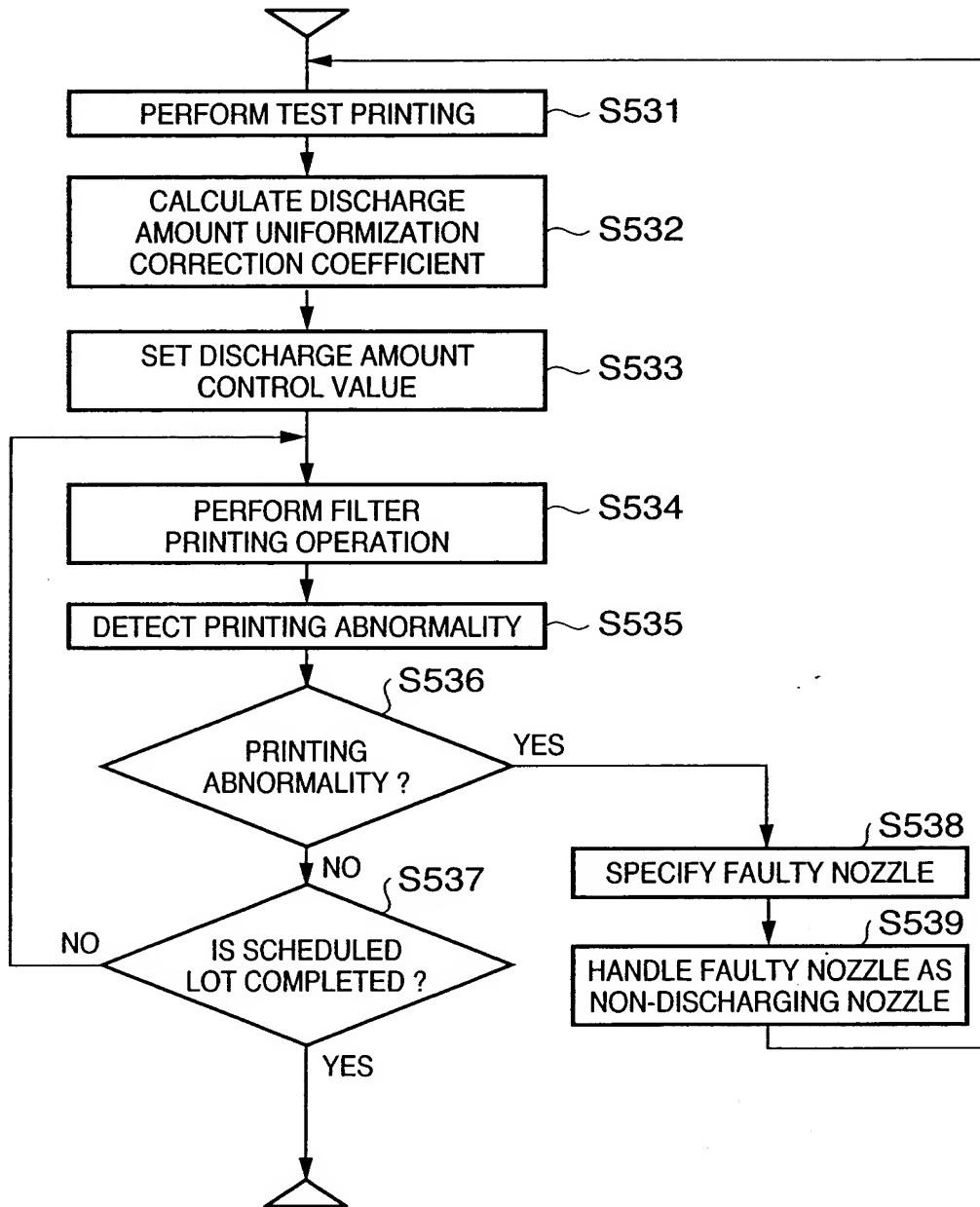
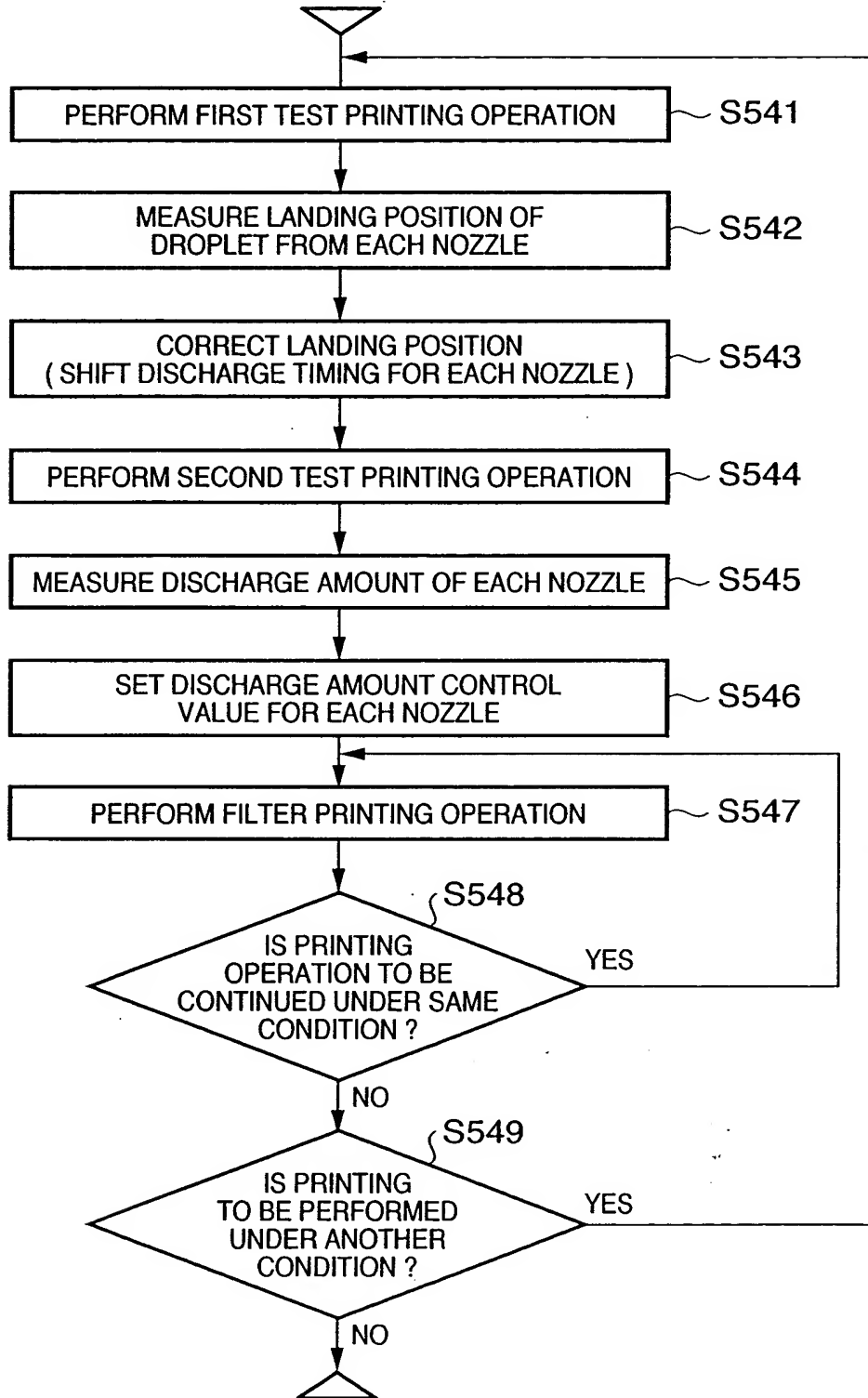


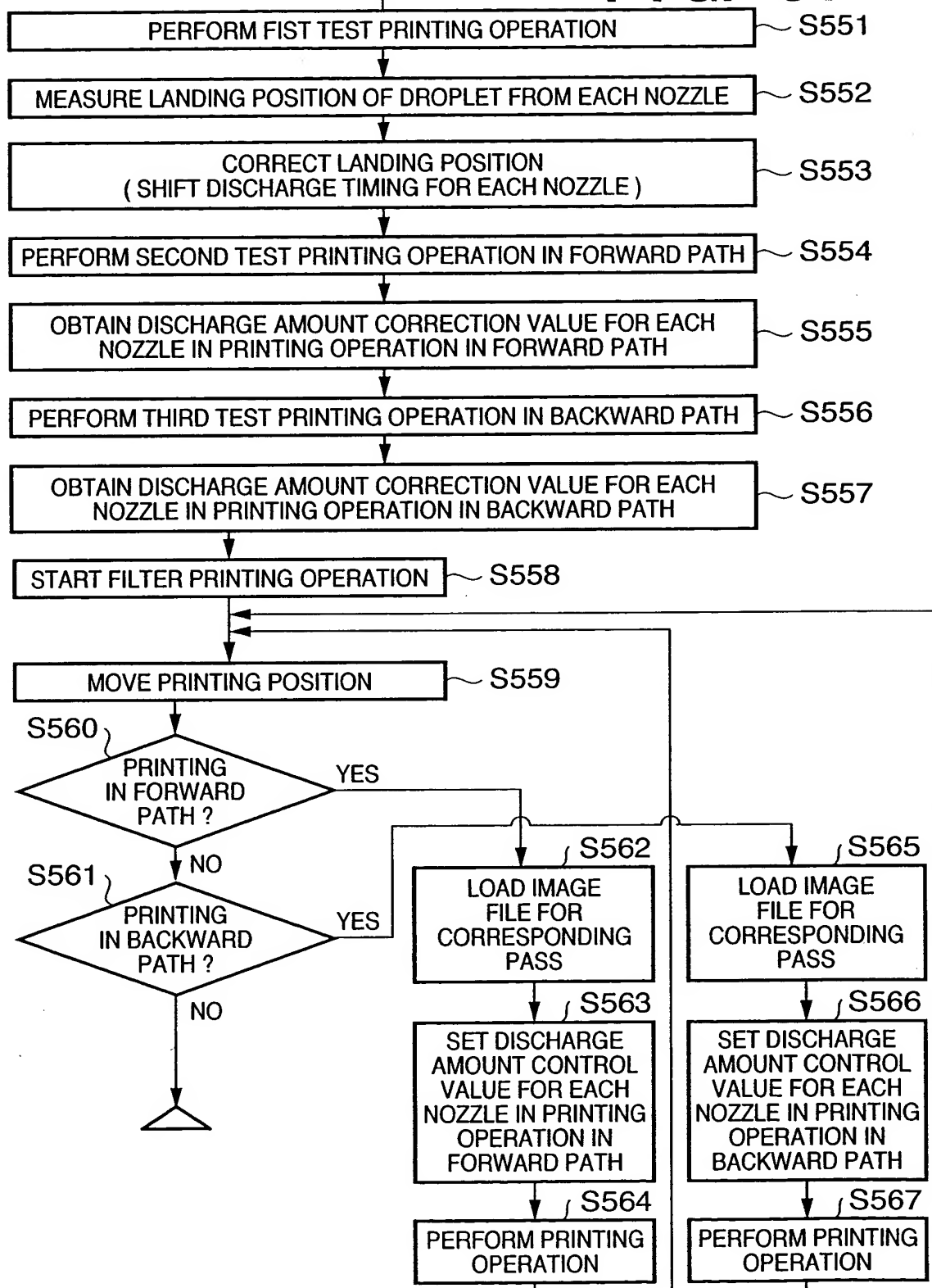


FIG. 33



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FIG. 34



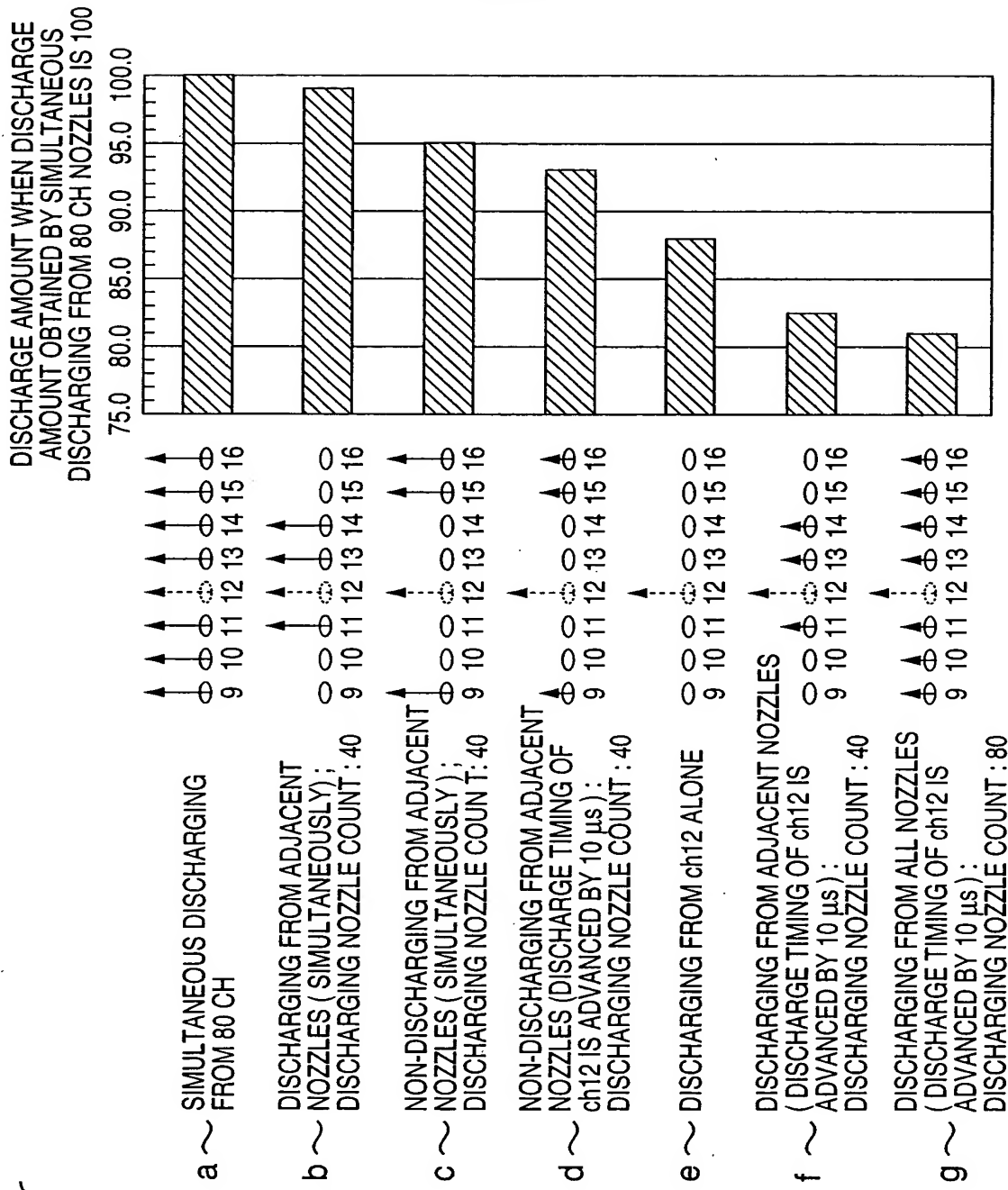


FIG. 35

## FIG. 36

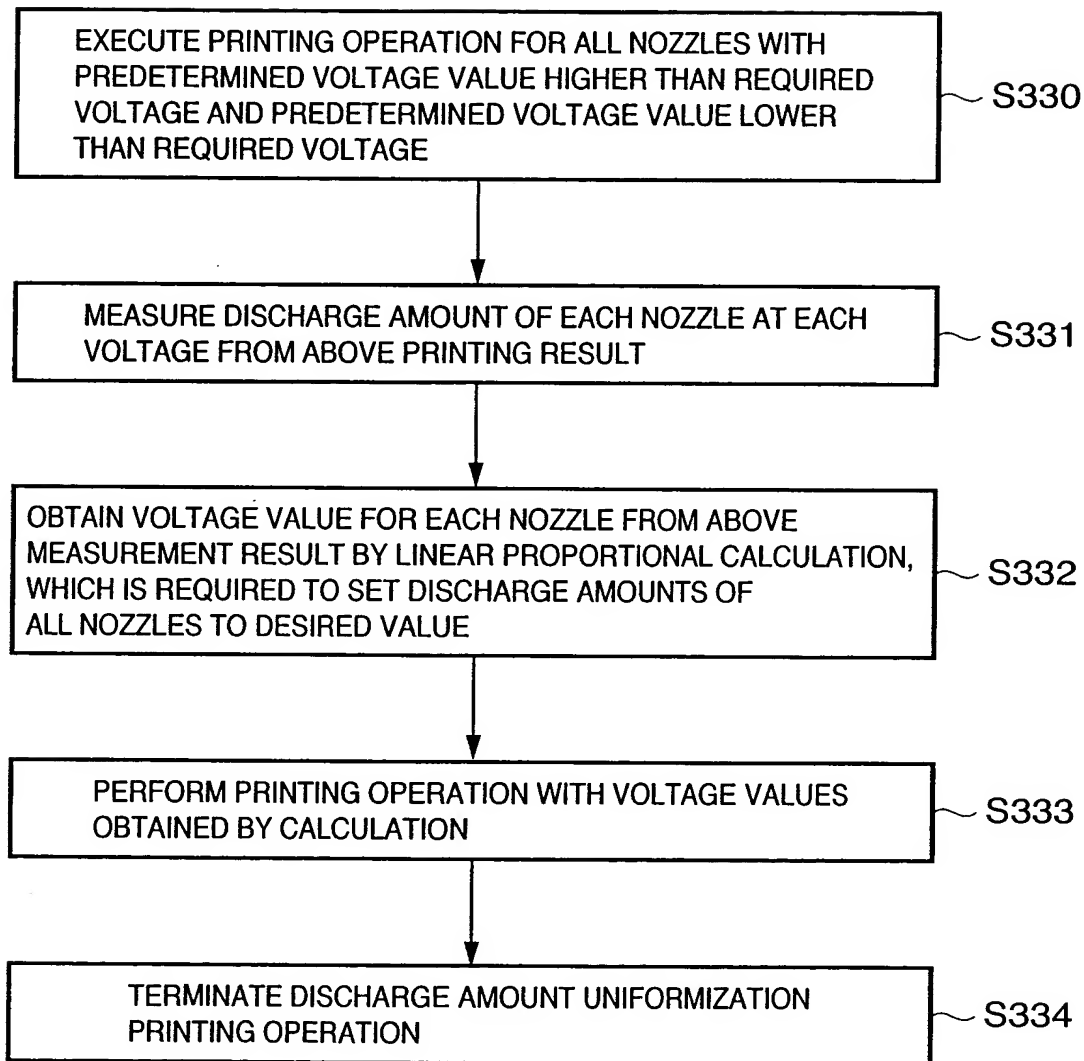
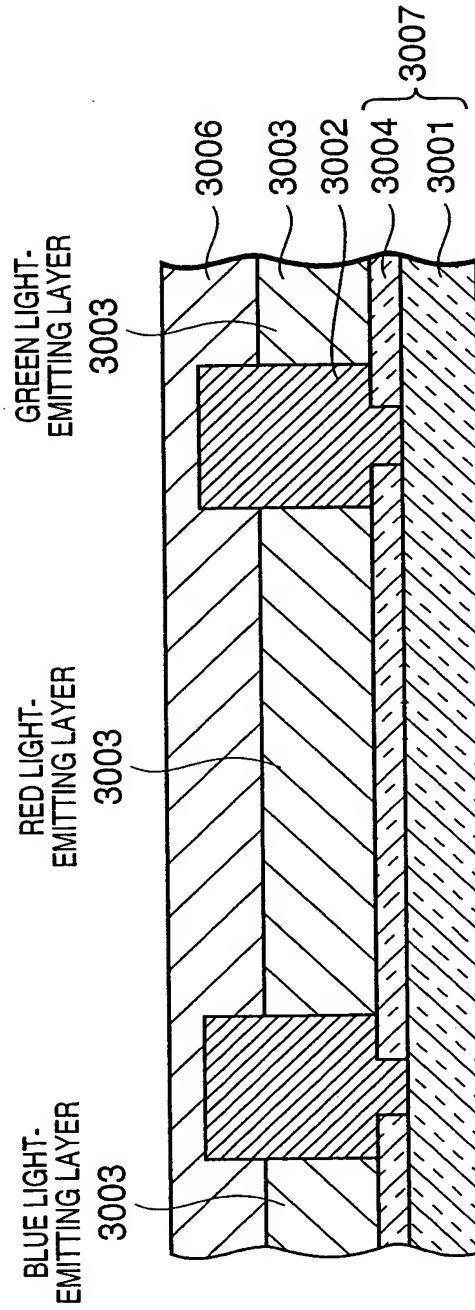
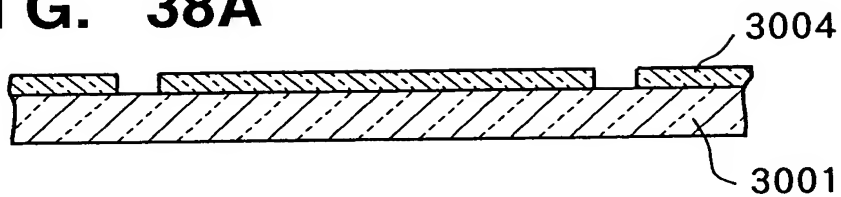


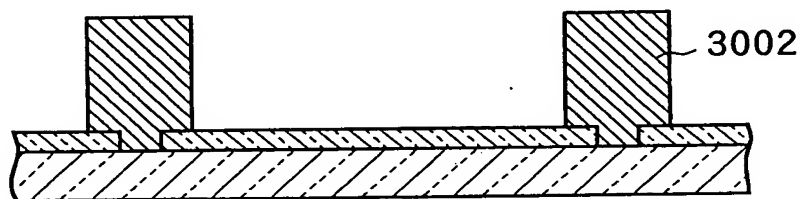
FIG. 37



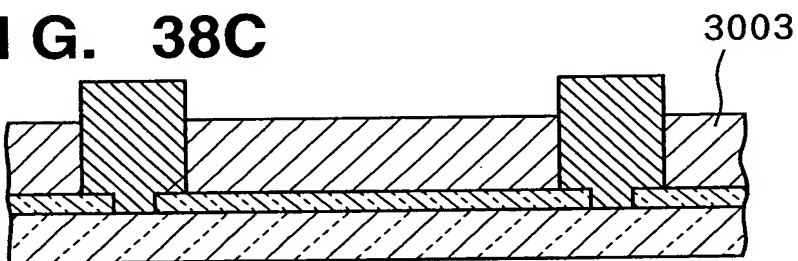
**FIG. 38A**



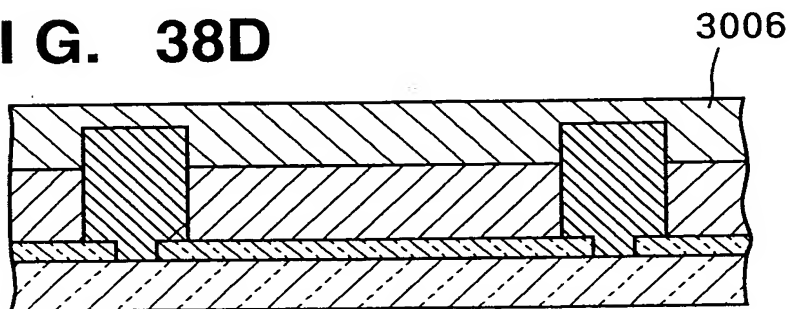
**FIG. 38B**



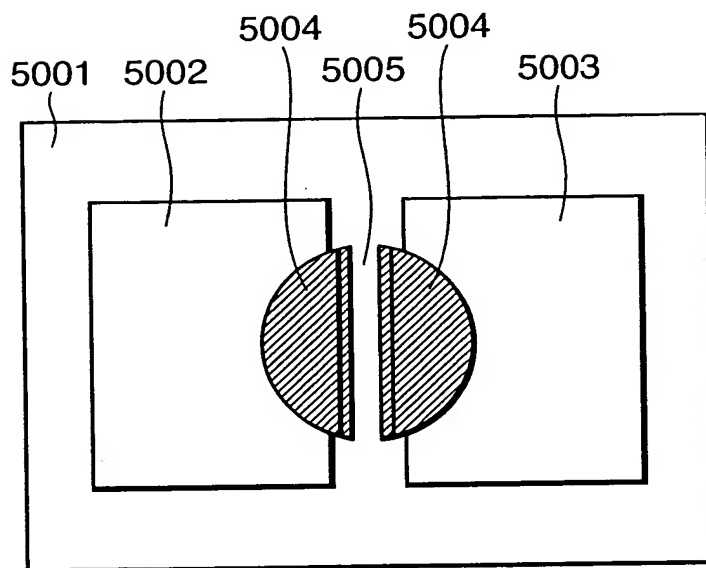
**FIG. 38C**



**FIG. 38D**



**FIG. 39A**



**FIG. 39B**

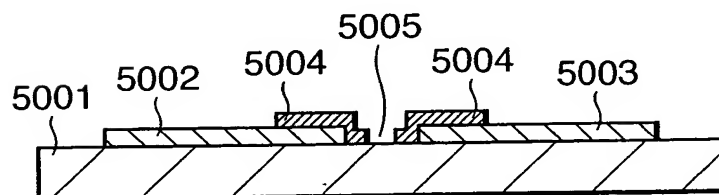


FIG. 40A

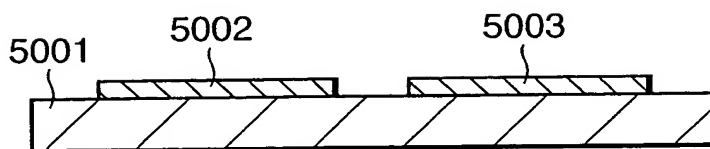


FIG. 40B

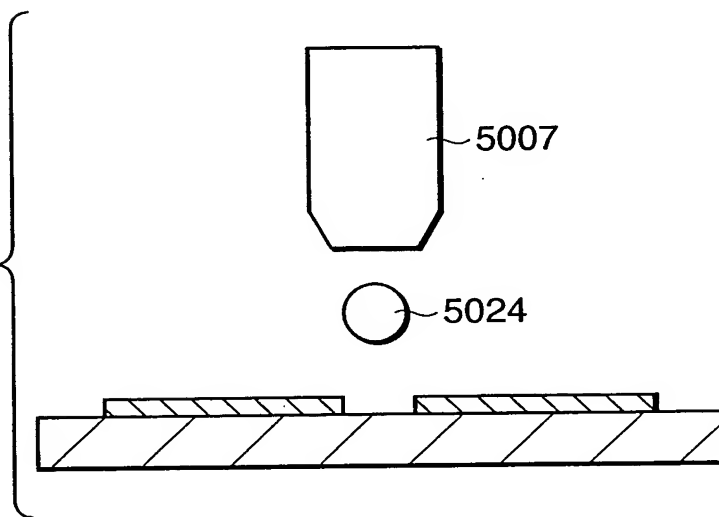


FIG. 40C

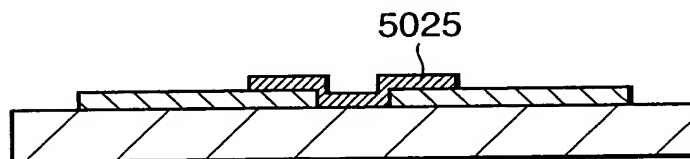


FIG. 40D

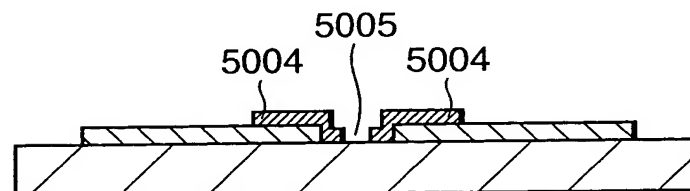




FIG. 41

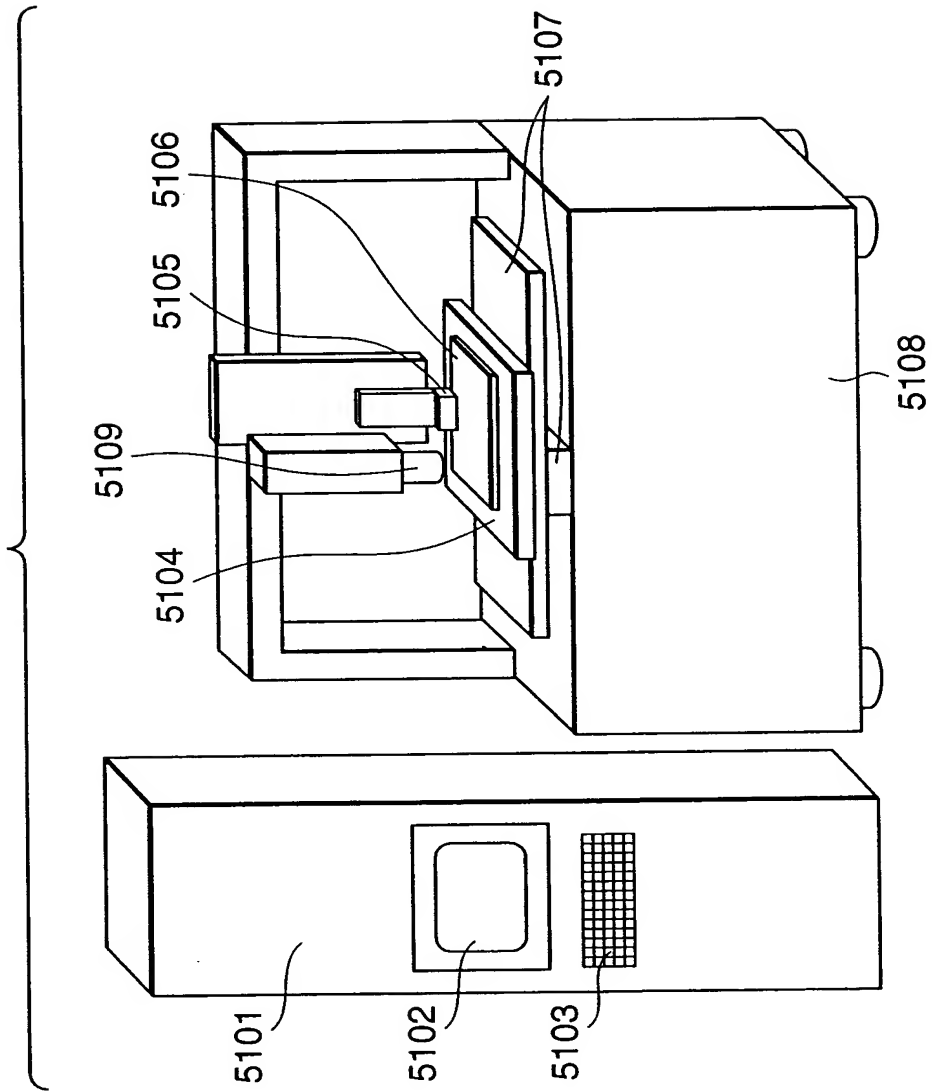


FIG. 42

